REMARKS

Reconsideration and allowance of this application are respectfully requested.

Claims 1-16 are all the claims pending in the application.

I. Summary of Final Office Action

Claims 1, 2, 5, 9, 10, 14-16 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable by Hamada (U.S. Patent 6,754,347) in view of Blatter et al (U.S. Patent 5,838,873; "Blatter") in further review of Anderson et al (U.S. Patent 6,091,772; "Anderson").

Claims 3, 4, 6, 7, 8, 11, 12, and 13 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Hamada in view of Blatter in further review of Anderson in further view of Oishi et al (U.S. 6,779,195).

II. Claim Amendment

Applicant amends claim 15 to more clearly define the claimed subject matter therein such that (i) the additional information extracted by the claimed additional information classifier is that of *a packetized elementary stream (PES) header or a user data region*; and (ii) the claimed additional information parser outputs a parsed result *when the user search information is coincident* with the additional information. No new matter is added.

Applicant respectfully submits the amended claim define patentable subject matter.

III. Analysis of 103(a) Rejection of Claims

[Claims 1, 2, 5, 9, 10 and 14-16]

Applicant respectfully traverses the Examiner's rejection based on Hamada, Blatter and Anderson.

Applicant submits that all the references, taken alone or in combination, do not teach or suggest the packet parser and the audio/video (AV) producer as recited in the claim, thereby not having rendered the claimed apparatus obvious over the references.

In the MPEG standards, audio/video data are transmitted in the form of a transport stream (TS), which comprises TS packets. Each TS packet may be an audio and/or video packet (program data packet itself) or a program specific information (PSI) packet containing a Program Association Table (PAT), a Program Map Table (PMT), or so on. As described in the specification, in order to store an audio/video data for a certain program, a general storage device satisfying the MPEG standard stores an audio/video packet and corresponding PSI packets together in the form of a single program TS packet (Fig. 1B). Accordingly, a large capacity storage medium is required for storing the PSI packets along with the audio and/or video packet.

By contrast, however, the claimed audio/video storing apparatus is characterized in that additional information corresponding to packet identifier information (PID) extracted from a PSI packet is output (produced) and inserted into a particular region of the audio and/or video packet (program data itself) instead of storing PSI packets themselves along with the audio and/or video packet in the form of a single program TS, whereby the capacity overload of a storage may be reduced.

Importantly, here, the additional information as recited in the claim is distinguished from a PSI packet and the PID extracted from the PSI packet. First, the additional information is described as corresponding to the PID but not described as being the PID itself. Further, the claim clarifies that the additional information does not include the PID.

Hamada

That being considered, the Examiner's position is not reasonable when alleging that the packet parser as an element of the claimed storing apparatus is disclosed by Fig. 4 and col. 8, lines 4-14 of Hamada.

In Hamada, the DMUX 41 of Fig. 4 might be alleged to extract TS packets such as PSI packets and using PIDs of the PSI packets. However, there is no teaching or suggestion that the DMUX 41 outputs or produces additional information as recited in the claim, which is literally differentiated from the PIDs in the claim languages. In other words, when the additional information is described as corresponding to the PID, the additional information is not the PID itself. In addition, assuming, arguendo, that the DMUX 41 may extract packet information from a PSI as alleged by the Examiner (page 3, line 1 of the office action), the DMUX 41 does not output or produce additional information which is later inserted into a particular region of the audio and/or video packet.

As generally known in the art, a packet information or PID is a numeric value which identifies the data contained in a TS packet comprising the PID and the data. With respect to PIDs of PSI packets, these PIDs only identify corresponding PSI packets such as a PAT or a PMT, but they are not such element as to be includable in another packet, particularly, an audio and/or video packet which also comprises its own PID and program (audio/video) data. Further, in the claim, the additional information is described as not including the PID, whereby the additional information is clearly distinguished from the PID.

Therefore, Hamada does not teach or suggest the claimed packet parser since the reference fails to disclose the claimed additional information.

For the same reasoning of not disclosing the additional information as claimed, Hamada also fails to teach or suggest the audio/video producer of the claimed storing apparatus as opposed to the Examiner's allegation that "Fig. 6 shows additional information that can be added to the packet parser into a particular region".

Reviewing Fig. 6 and related col. 8, the reference merely explains how a TS packet of a desired channel is extracted, which is only a generally known method to implement the MPEG standards. Specifically, the reference iterates that PIDs of video packets are obtained from PMTs and those PMTs are identified by their PIDs contained in PAT. The "additional information" recited in col. 8, line 12 of the reference only indicates information included in PSI tables but does not indicate the claimed additional information to be inserted into a particular region of an audio and/or video packet. Thus, Hamada fails to teach or suggest the claimed audio/video producer.

Anderson

The Examiner asserts in the office action that Anderson teaches the claimed additional information by stating that "Anderson et al teaches the use of additional information that is sent through the MPEG-2 transport layer containing content of the transport stream and thus not containing packet identifier information as described in col. 5, lines 50+)".

Applicant submits that neither the "additional information" (col. 5, line 53) nor the "information" (col. 5, line 55) teaches or suggests the claimed additional information.

As stated in the reference, the "information" defines the content of the stream (col. 4, lines 44-45), but it is contained in the tables such as PAT, PMT, etc. which constitute a PSI packet (col. 4, lines 54-56). Before discussing whether this "information" is not PID or does not contain PID, it is clear that this "information" is contained in the tables not the content of the stream (i.e., program data packet). Accordingly, it is also clear that this "information" is not such information which is inserted into an audio and/or video packet itself (program data packet containing the content of the stream), and there is no such teaching or even suggestion in the reference.

As to Anderson's "additional information" (related or unrelated to the corresponding audio/video data), this "additional information" is described as being transported in the form of a transport packet, but there is no comments in the reference whether it is transmitted as a part of an audio and/or video packet. Instead, it clearly states that "[t]his additional information is predominantly sent in the MPEG-2 Transport Layer table sections". Here, the table sections mean the tables of a PSI packet. This statement means that Anderson's additional information is sent in a PSI packet. As discussed thus far, a PSI packet is clearly not an audio and/or video packet as understood throughout the present application including the claims. Thus, while Anderson's "additional information" is contained in a PSI packet, and the claimed additional information is contained in an audio and/or video packet, Anderson fails to teach or suggest the claimed additional information.

As mentioned earlier, the claimed storing apparatus is characterized in that the capacity overload of a storage may be reduced by outputting and inserting additional information other

than PID and a PSI packet itself into an audio and/or video packet. In this respect, the Examiner's primary reference (Hamada) has no relevance with reducing a storage overload while the reference is only directed to scrambling/descrambling of data and charging subscribers for viewing descrambled data. Blatter, a secondary reference, however, might be related to an aspect similar to that of the present application in that the reference utilizes condensed PSI (CPSI) to reduce a storage overload. Anderson might also be alleged to show some similarity when it suggests reducing of overloaded data transmission by removing unnecessary table sections. However, the aspect of reducing a storage overload is a general motivation in the art leading to design of efficient audio/video data transmission/storage/search apparatuses and methods. Accordingly, there could be numerous methods and apparatuses to achieve such aspect. In this regard, Blatter or Anderson may be only a particular solution for reducing an overload of data transmission. However, these references use completely different methods from the present application, and their specific objectives of the inventions are also different to that of the present application. More importantly, no references teach or suggest an apparatus or method in which additional information other than PID and a PSI packet is output and inserted into an audio and/or video packet in order to reduce the storage overload. Since such a specific element of the claim is not taught or suggested by any reference, there could not have been any motivation or desirability to combine the references to implement such specific apparatuses and methods as claimed.

Therefore, Applicant respectfully submits that at least for the above reasons, claims 1, 10 and 15 would not have been obvious over the references.

Dependent claims 2, 5, 9, 14 and 16 should be allowable at least by virtue of their dependency from claim 1, 10 or 15.

[Claims 3, 4, 6-8, and 11-13]

With respect to claim 3, the Examiner reiterates his pervious rationale to reject the claim without finding the claimed time data table (TDT) parser from any of the references.

As recited in the claim, the additional information is output from each of the EIT, SDT and TDT parsers, and this additional information is distinguished from the event information table (EIT), service description table (SDT) or TDT packet itself. In this respect, no references, taken alone or in combination, teach or suggest that the EIT, SDT or TDT parser outputs the additional information other than the respective EIT, SDT or TDT packet itself.

Therefore, Applicant respectfully submits that claim 3 would not have been obvious over the references.

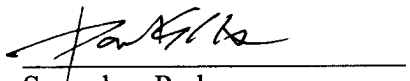
Claim 3 and dependent claims 4, 6-8 and 11-13 should also be allowable at least by virtue of their dependency from claim 1, 10 or 15.

IV. Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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